

## Dual-band Antenna

### Abstract

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A dual-band antenna includes a multi-layer substrate and metal strips formed on different layers of the multi-layer substrate. The multi-layer substrate includes at least a first substrate and a second substrate. The metal strips include a first metal strip, a second metal strip, and a sleeve structure. The first metal strip formed on the first substrate further includes a first feeding end and a first open circuit end. The second metal strip formed on the second substrate further including a second feeding end, a vertical metal structure and a second open circuit end, wherein the second feeding end connects the first metal strip through a first conductive via. 10 The sleeve structure formed on the multi-layer substrate by skirting the first metal strip is electrically isolated. By providing the dual-band antenna, a first frequency can be resonated by the strip between the first feeding end and the second open circuit end, and also a second frequency can be resonated by the strip between the first feeding end and the first open 15 circuit end. Additionally, by providing the sleeve structure, the transmission bandwidth for the second frequency can be increased. 20